AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): Contrast agent injection system for injecting a contrast agent into a body, having at least a first injector (1) for delivering the contrast agent to a tube (9) connected to the body, and having at least a second injector (2) for delivering a rinsing fluid to the tube (9), characterized by a control device (16) which monitors the delivery of the contrast agent through the tube section (7) and automatically controls the delivery of the rinsing fluid by the second injector (2) after the delivery of the contrast agent has been terminated.

2. (original): Contrast agent injection system according to Claim 1, characterized in that the control device (16) is connected to a sensing device (14) which senses the termination of the delivery of the contrast agent.

3. (original): Contrast agent injection system according to Claim 2, characterized in that the sensing device (14) is a fluid flow sensing device which senses the termination of the flow of contrast agent in the tube (9).

4. (original): Contrast agent injection system according to Claim 3, characterized in that the fluid flow sensing device (14) has a light-emitting unit and a light-receiving unit for sensing the light reflection caused by the fluid particles.

5. (original): Contrast agent injection system according to Claim 3, characterized in that the fluid flow sensing device (14) has a sound-emitting unit and a sound-receiving unit for sensing the sound frequency shift caused by the moving fluid particles.

6. (original): Contrast agent injection system according to one of the preceding claims, characterized in that the control device (16) is connected to a contrast agent volume calculating device (24).

7. (original): Contrast agent injection system according to Claim 6, characterized in that the contrast agent volume calculating device (24) has a contrast agent volume memory device in which the contrast agent volume located in the first injector (1) is stored.

8. (currently amended): Contrast agent injection system according to ~~one of the preceding claims~~ claim 1, characterized in that the first injector (1) has a status display (18).

9. (currently amended): Contrast agent injection system according to ~~one of the preceding claims~~ claim 1, characterized in that the control device (16) is connected to a detection device (20) for detecting a status display signal emitted by the status display (18) of the first injector (1).

10. (currently amended): Contrast agent injection system according to ~~one of the preceding claims~~ claim 1, characterized in that the control device (16) is connected to a contrast agent injection time calculating device (22).

11. (original): Contrast agent injection system according to Claim 10, characterized in that the contrast agent injection time calculating device (22) has a contrast agent injection time memory device in which the contrast agent injection time is stored.

12. (currently amended): Contrast agent injection system according to ~~one of the preceding claims~~ claim 1, characterized in that the control device (16) is connected to an input device (26) for inputting the contrast agent volume and the contrast agent injection time.

13. (currently amended): Contrast agent injection system according to ~~one of the preceding claims~~ claim 1, characterized in that the first injector (1) and the second injector (2) are connected via an adapter (7) to a tube (9) which is connected to the body.

14. (original): Contrast agent injection system according to Claim 13, characterized in that valves (10, 11) are provided for filling the injectors (1, 2).

15. (original): Contrast agent injection system according to Claim 14, characterized in that the valves (10, 11) can be controlled via the control device (16).

16. (currently amended): Contrast agent injection system according to ~~one of the preceding claims~~ claim 1, characterized in that the rinsing fluid is sodium chloride.

17. (currently amended): Contrast agent injection system according to ~~one of the preceding claims~~ claim 1, characterized in that the injectors (1, 2) are single-piston or multipiston injectors.

18. (currently amended): Contrast agent injection system according to ~~one of the preceding claims~~ claim 1, characterized in that interchangeable pressure syringes (3, 4) can be held by the injectors (1, 2) in mounting openings (27, 28).

19. (original): Contrast agent injection system according to Claim 18, characterized in that the mounting openings (27, 28) have different mounting openings corresponding to the associated pressure syringes (3, 4) .

20. (currently amended): Contrast agent injection system according to ~~one of the preceding claims~~ claim 1, characterized in that the control device (16) has a multiplicity of internal monitoring flags (FS, SS, VE, ZE) for monitoring the delivery of contrast agent.

21. (original): Contrast agent injection system according to Claim 20, characterized in that the control device (16) controls the second injector (2) in order to deliver the rinsing agent when all the monitoring flags (FS, SS, VE, ZE) indicate the termination of the delivery of contrast agent.

22. (previously presented) Contrast agent injection system for injecting a contrast agent into a body, having at least a first injector (1) for delivering the contrast agent to a tube (9) connected to the body, and having at least a second injector (2) for delivering a rinsing fluid to the tube (9), characterized by a control device (16) being arranged independently from said first injector (1), wherein said control device (16) is connected with its output to said second injector (2) for controlling said second injector (2), that the control device (16) is connected with its input to a sensing device (14), said sensing or detecting device (14) is sensing the fluid flow within a subordinate tube section (7a), said fluid flow being produced by said first injector (1), such that the control device (16) activates the second injector (2) if the sensing device (14) detects an interruption of the fluid flow within the tube section (7a) which is connected to said first injector (1).

23. (previously presented): Contrast agent injection system for injecting a contrast agent into a body, having at least a first injector (1) for delivering the contrast agent to a tube (9) connected to the body, and having at least a second injector (2) for delivering a rinsing fluid to the tube (9), characterized by a control device (16) being arranged independently from said first injector (1), wherein said control device (16) is connected with its output to said second injector (2) for controlling said second injector (2), that the control device (16) is connected with its input to a detection device (20) which detects an optical signal from said first injector (1) as a result of the interruption of the injection of said first injector (1), wherein the first injector (1) comprises a device (18) for producing a status display as an optical signal such that the control device (16) activates the second injector (2) when said detection device (20) detects the interruption of the injection of the fluid flow in the tube section (7a) which is connected to said first injector (1).

24. (previously presented): .Contrast agent injection system according to Claim 22 characterized in that the fluid flow sensing device (14) has a light-emitting unit and a light-receiving unit for sensing the light reflection caused by the fluid particles.

25. (currently amended): Contrast agent injection system according to Claim ~~24~~ 22 characterized in that the sensing device (14) has a sound-emitting unit and a sound-receiving unit for sensing the sound frequency shift caused by the moving fluid particles.

26. (previously presented): Contrast agent injection system according to claim 22, characterized in that the control device (16) is connected to a contrast agent volume calculating device (24).

27. (previously presented): Contrast agent injection system according to Claim 26 characterized in that the contrast agent volume calculating device (24) has a contrast agent volume memory device in which the contrast agent volume located in the first injector (1) is stored.

28. (currently amended): Contrast agent injection system according to claim ~~22~~ 23, characterized in that the control device (16) is connected to a contrast agent injection time calculating device (22).

29. (previously presented): Contrast agent injection system according to Claim 28, characterized in that the contrast agent injection time calculating device (22) has a contrast agent injection time memory device in which the contrast agent injection time is stored.

30. (previously presented): Contrast agent injection system according to claim 22, characterized in that the control device (16) is connected to an input device (26) for inputting the contrast agent volume and the contrast agent injection time.

31. (previously presented): Contrast agent injection system according to claim 22, characterized in that the first injector (1) and the second injector (2) are connected via an adapter (7) to a tube (9) which is connected to the body.

32. (previously presented): Contrast agent injection system according to Claim 31, characterized in that valves (10, 11) are provided for filling the injectors (1, 2).

33. (previously presented): Contrast agent injection system according to Claim 32, characterized in that the valves (10, 11) can be controlled via the control device (16).

34. (previously presented): Contrast agent injection system according to claim 22, characterized in that the injectors (1, 2) are single-piston or multipiston injectors.

35. (previously presented): Contrast agent injection system according to claim 22, characterized in that interchangeable pressure syringes (3, 4) can be held by the injectors (1, 2) in mounting openings (27, 28).

36. (previously presented): Contrast agent injection system according to Claim 35, characterized in that the mounting openings (27, 28) have different mounting openings corresponding to the associated pressure syringes (3, 4).

37. (new) Contrast agent injection system for injecting a contrast agent into a body, having at least a first injector (1) for delivering the contrast agent to a tube (9) connected to the body, and having at least a second injector (2) for delivering a rinsing fluid to the tube (9), characterized by a control device (16) being arranged independently from said first injector (1), wherein said control device (16) is connected with its output to said second injector (2) for controlling said second injector (2), that the control device (16) is connected with its input to a

sensing device (14), said sensing or detecting device (14) is sensing the fluid flow within a subordinate tube section (7a), said fluid flow being produced by said first injector (1), such that the control device (16) activates the second injector (2) if the sensing device (14) detects an interruption of the fluid flow within the tube section (7a) which is connected to said first injector (1),

wherein, the control device (16) is connected to a contrast agent volume calculating device (24), and the contrast agent volume calculating device (24) has a contrast agent volume memory device in which the contrast agent volume located in the first injector (1) is stored.

38. (new): Contrast agent injection system for injecting a contrast agent into a body, having at least a first injector (1) for delivering the contrast agent to a tube (9) connected to the body, and having at least a second injector (2) for delivering a rinsing fluid to the tube (9), characterized by a control device (16) being arranged independently from said first injector (1), wherein said control device (16) is connected with its output to said second injector (2) for controlling said second injector (2), that the control device (16) is connected with its input to a detection device (20) which detects an optical signal from said first injector (1) as a result of the interruption of the injection of said first injector (1), wherein the first injector (1) comprises a device (18) for producing a status display as an optical signal such that the control device (16) activates the second injector (2) when said detection device (20) detects the interruption of the injection of the fluid flow in the tube section (7a) which is connected to said first injector (1),

wherein, the control device (16) is connected to a contrast agent volume calculating device (24), and the contrast agent volume calculating device (24) has a contrast agent volume memory device in which the contrast agent volume located in the first injector (1) is stored.

39. (new): Contrast agent injection system for injecting a contrast agent into a body, having at least a first injector (1) for delivering the contrast agent to a tube (9) connected to the body, and having at least a second injector (2) for delivering a rinsing fluid to the tube (9), characterized by a control device (16) being arranged independently from said first injector (1), wherein said control device (16) is connected with its output to said second injector (2) for controlling said second injector (2), that the control device (16) is connected with its input to a

detection device (20) which detects an optical signal from said first injector (1) as a result of the interruption of the injection of said first injector (1), wherein the first injector (1) comprises a device (18) for producing a status display as an optical signal such that the control device (16) activates the second injector (2) when said detection device (20) detects the interruption of the injection of the fluid flow in the tube section (7a) which is connected to said first injector (1),

wherein, the control device (16) is connected to a contrast agent volume calculating device (24), the control device (16) is connected to a contrast agent injection time calculating device (22), and the contrast agent injection time calculating device (22) has a contrast agent injection time memory device in which the contrast agent injection time is stored.